XII.

On a New Species of Medusa related to Stephanomia, CRYSTALLOMIA POLYGONATA.

BY JAMES W. DANA.

THE species here described was taken by the writer in the Pacific, in lat. 30° N. and long. 179° E., on the 24th of May, 1841.

The animal is nearly colorless and transparent. Length, 4 inches; diameter, 1 – 1$\frac{1}{6}$ inches. The body is naturally divided into an anterior and posterior portion, the *former* polygonally ovoid, the *latter* subprismatic, a little tapering.

The pieces or blocks of the posterior portion are thin wedge-shaped (Fig. B), and lie in two longitudinal series, facing in opposite directions, the blocks of the two overlapping and alternating with one another. Together they give to this part of the body approximately the form of a six-sided prism, with the sides slightly concave. From the position of the mouth, two of these sides may be called the dorsal, and two the ventral; the two lateral consist each of two longitudinal planes, owing to a slight angle along the medial line.

The angle between the two dorsal surfaces, and also that between the two ventral, is truncated; and at this place in each block there is a circular aperture closed by a valve opening into a sac situated transversely within the block or piece (Fig. B). The valve was in constant action when the animal was first taken. A slender vessel runs inwardly from the sac through the block, perforating its inner or thin edge, showing the existence of a kind of aquiferous system in the animal.

The blocks constituting the ovoidal or anterior portion of the animal are of very different shape from those of the posterior part, as seen in Fig. C; and they are so arranged together as to give the ovoid a series of narrow longitudinal faces a little concave. They are like quadrangular wedges, thinning from one angle to that diagonally opposite, and having the two outer faces divided vertically into two concave faces. These blocks are so set together that one series corresponds to the angles, and another to the faces, of the hexagonal prism of the posterior portion of the body.

The ovoidal anterior portion has a long longitudinal opening on one side, at the inner part of which, just below the medial line of the body, there is a large number of tentacles surrounding the mouth, and small red clusters of retracted nettling-filaments.

The tentacles (see Fig. A) are short, and not at any time exsert beyond the body; their length is about one sixth of an inch, and their general appearance much as in the Actiniæ. From the red clusters a few slender nettling-filaments were usually extended; the animal kept dropping them slowly and retracting them wholly or partially by sudden starts. When most protruded, they were twice the length of the body. The filaments themselves are colorless, or nearly so; but the bulbs they bear at intervals are red (Fig. D), and these give the red color to the retracted filaments.

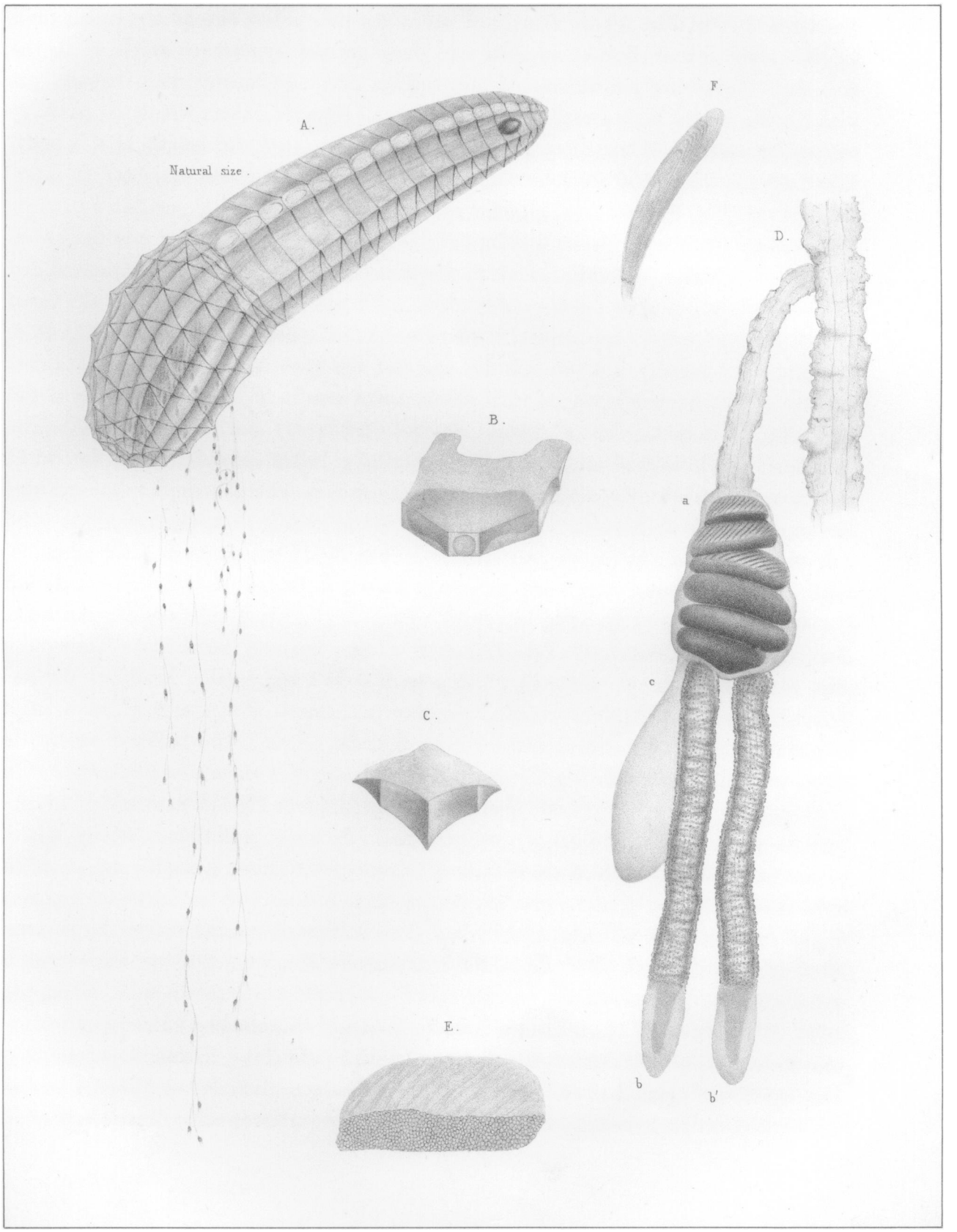
The *filaments* appeared to be tubular (Fig. D), and this tube extended into the bulbs, through the slender pedicel by which they were suspended. The bulb contains a red convoluted cord, — there being usually about *six* turns. The upper three of the turns had an oblique striated appearance, arising from an oblique series of spiculæ (Fig. D, *a*, and Fig. F); but this oblique striation stopped short of the lower side of the turn; and, in the three lower turns, no such striation was seen in any part on the side of the cord exposed to view. The surface of the red cord is very minutely hexagonal. The *spiculæ* (Fig. F) were slender cells, glassy in aspect when separated from the cord; each contains a delicate and seemingly beaded thread, in several longitudinal convolutions. They evidently correspond in structure to the so-called "lasso-cells" of Agassiz.

The bulb bears below two *tentacle-like cords* (Fig. B, *b*, *b'*), as large in diameter as the convoluted cord, being apparently the continuation of this cord, and indicating that the convolution was probably in two coils. There is also along side *an oblong pellucid sac* (Fig. D, *c*). The tentacle-like prolongations were very retractile. They were covered with papillæ or minute prominences, and had a red color, nearly to the extremity; the extremity was colorless, and showed a tube-like appearance within, as if it were the termination of the tube of the filament above. The pellucid sac (*c*) is about as long as the bulb.

From near the mouth a canal, apparently alimentary (see Fig. A), passes in a straight line along the middle of the body posteriorly, nearly to its posterior extremity, where it terminates in an ovoidal organ of a deep brown color, a little glassy in aspect, or at least shining.

The Stephanomia hitherto figured and described have generally been mere fragments of perfect individuals. These figures represent the glassy body at the posterior extremity as wholly uncovered, and the nettling-filaments as centrally terminal at the other extremity; and this would be the condition if the blocks of the posterior extremity and all of the ovoidal anterior portion had been lost. These blocks actually drop apart very easily, so that this is no improbable supposition.

I suggest for the genus the name *Crystallomia*, and for the species, *C. polygonata.*



James D. Dana from nat.

CRYSTALLOMIA POLYGONATA Dana.